Multimedia Amp M1

AUDAC

PROFESSIONAL AUDIO EQUIPMENT

Multimedia Amplifier M1

User Manual & Installation Guide

AUDAC PROFESSIONAL AUDIO EQUIPMENT

User Manual & Installation Guide

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Introduction

This section describes briefly the functionality of the M1amplifier.

The M1 Multimedia Amplifier is developed as a "all in one", flexible solution for multi-purpose use.

During the development of the M1, the AUDAC-engineers wanted to achieve four goals:

- Delivering a flexible audio solution for multi purposes.
- Easy to use
- Excellent sound quality
- An advanced digital control interface

Where other multi-zone amplifiers aren't 'all in one' devices, the M1 is a truly polyvalent solution. It has the flexibility of an advanced multi-zone mixer, combined with several digital options. By simply surfing to the webpage, you can get full control of the M1 basic functions. The M1 can be directly plugged into a basic Ethernet LAN network. No extra control software is needed, just a computer (pda, pocket pc, …) and a web browser with the Macromedia Flash Player 6.0 (or higher) plug-in installed, will do the job.

The M1 can be used in commercial applications such as restaurants, clubs, bars, theatres, hotels, conference facilities, houses of worship, professional offices, …

As a simple example, when installed in a restaurant, the M1 can provide popular music in the bar, cocktail music in the lounge, jazz in the waiting area, and classical music in the dining room.

Six microphones can be plugged in (XLR) with individual zone paging or mixing zone paging. Each room can have a digital wall mounted control panel for selecting a music source, and setting the volume.

There are two versions of the M1

- M1: with 2 x stereo 150W / 4Ohm Amplifier (Only for Zone 1 and Zone 2 !)
- M1-Light: Without built in Amplifiers

Chapter

1

Environment

Do not place this unit in an enclosed environment such as a bookshelf or closet. Ensure there is adequate ventilation to cool the unit. Do not block the ventilation openings.

Do not place the unit in environments which contain high levels of dust, heat, moisture or vibration.

Do not use the unit near water or other liquids. Make sure no water or other liquids can be spilled, dripped or splashed on the unit.

The unit is developed for indoor use only. Do not use the unit outdoors.

Do not place objects (books, vases, …) on top of the unit.

Place the unit on a stable base.

Safety Requirements

Always handle the unit with care.

Only use a grounded socket outlet and a power cord with grounding plug to plug in the unit.

This unit is not a toy. It should not be operated by children.

Do not stick objects through the ventilation openings of the M1.

Do not open the unit. (risk for electrical shock)

The M1 contains several 'jumpers' which can be set. These settings may only be done by qualified people.

CAUTION - SERVICING

This unit contains no user serviceable parts. Refer all servicing to qualified service personnel. Do not perform any servicing unless you are qualified to do so.

Note

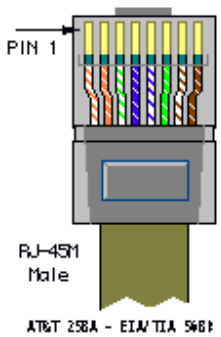
This product conforms to the following European Standards: EN 50081-1: 1992, EN 50082-1: 1992, EN 60065: 1994

Pin connections on Connectors

XLR (input, output): pin1=Ground, pin2= hot(s+), pin3=cold(s-)

Cinch: tip= Signal (left or right), Ring= Ground

RJ45 (RS485) Wall panel:



Pin 1	White-Orange	/
Pin 2	Orange	/
Pin 3	White-Green	**+12V DC**
Pin 4	Blue	**RS485 A**
Pin 5	White-Blue	**RS485 B**
Pin 6	Green	**GND**
Pin 7	White-Brown	/
Pin 8	Brown	/

Speakon (Left, Amplified Outputs Zone 1 and 2):

pin1+ = left out, pin1- = gnd, pin2+ = right out, pin2- = gnd

Speakon (Right, Amplified Outputs Zone 1 and 2):

pin1+ = right out, pin1- = gnd, pin2+ = /, pin2- = /

RS232 (serial connection interface)

The serial data protocol and wiring can be downloaded at www.audac.be/download or can be asked at info@audac.be.

ATTENTION
The Cat5 cabling must always be 'straight'. In case of self made cabling, it must be done as described above, to make the system work properly.

Chapter

2

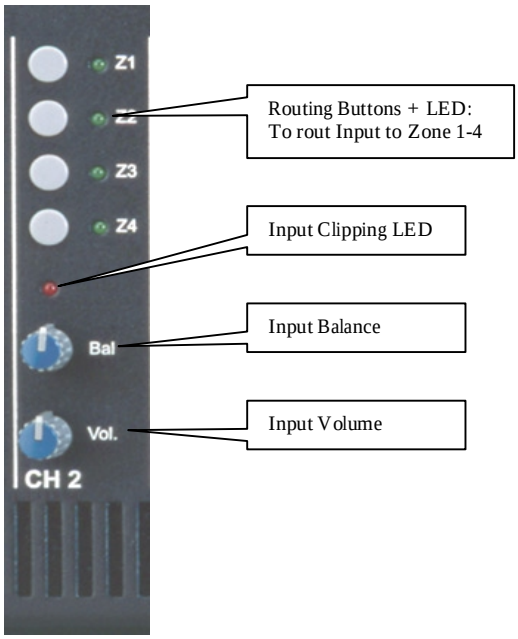
Overview front and rear panel of the M1

FRONT:

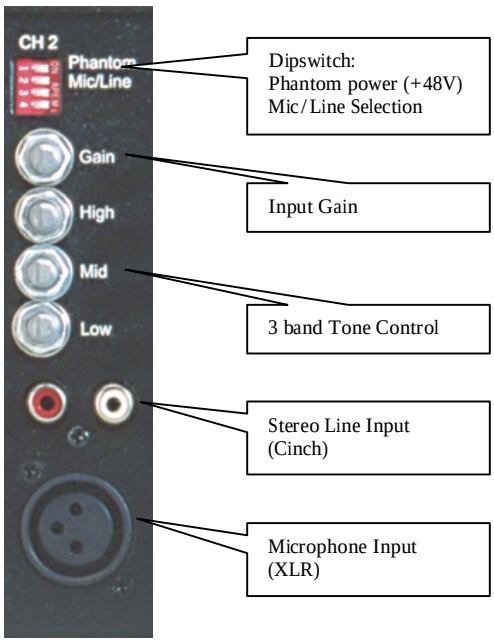
REAR:

Overview Inputs 1-6 (Mic./St. Line)

INPUT 1-6 (FRONT)

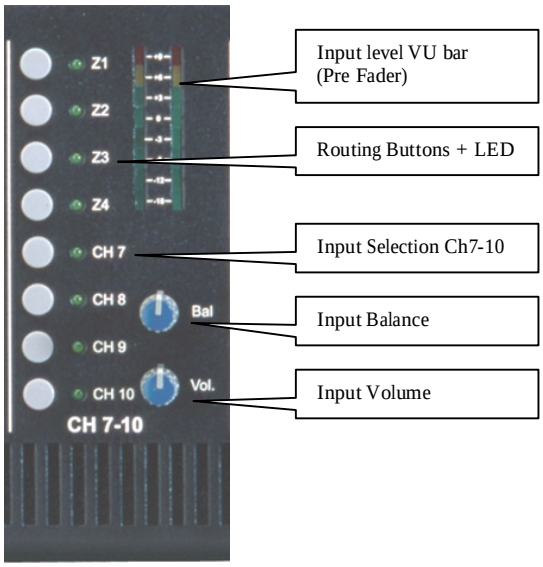


INPUT 1-6 (REAR)

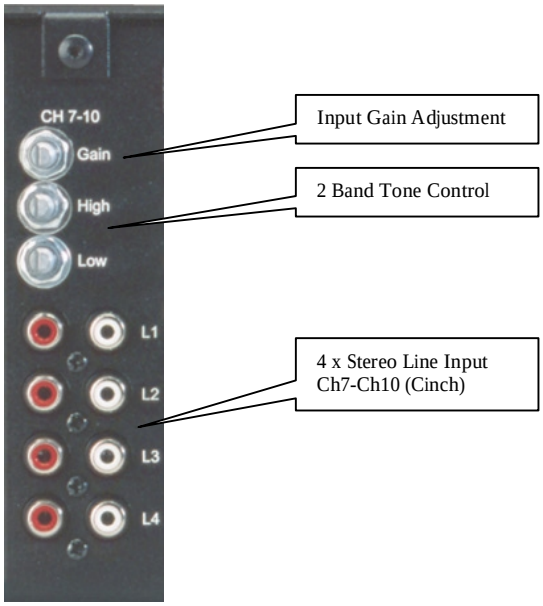


Overview Input 7-10 (4x St. Line)

INPUT 7-10 (FRONT)

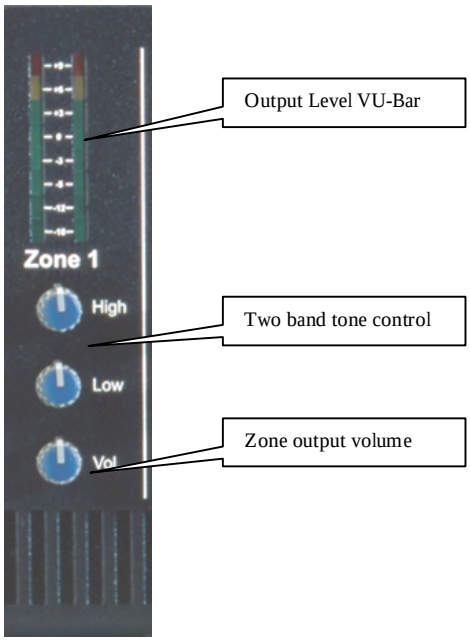


INPUT 7-10 (REAR)

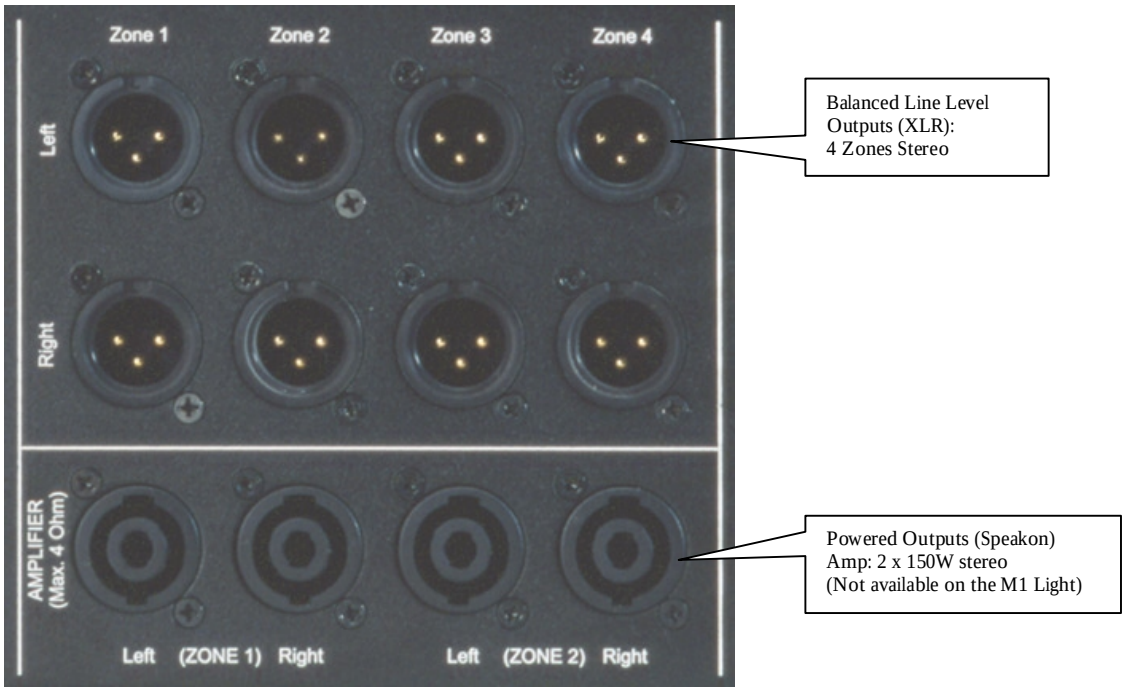


Overview Output Zones

OUTPUT ZONES 1-4 (FRONT)

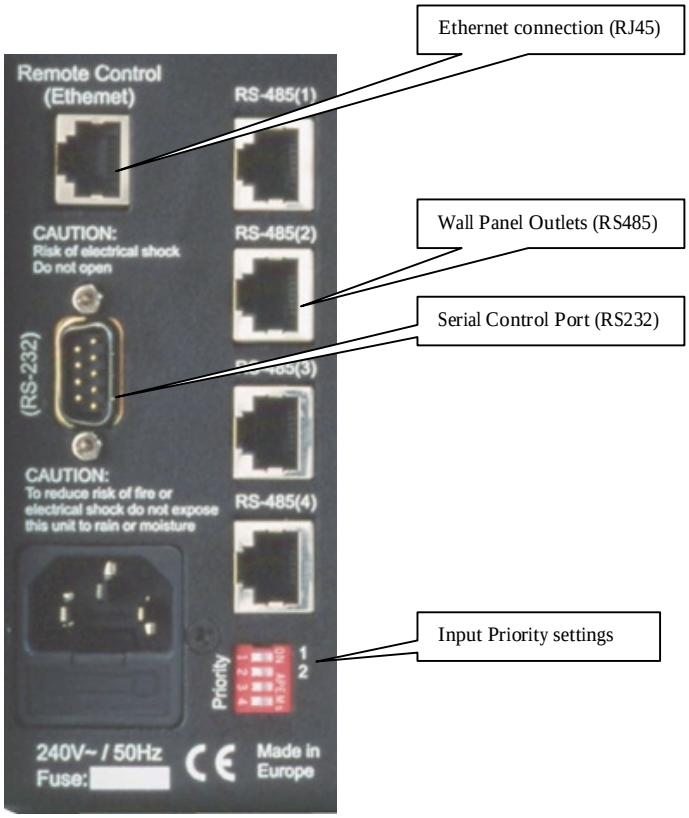


OUTPUT ZONES 1-4 (REAR)



Overview DATA Control Ports

DATA CONTROL PART (Rear)



Chapter

3

Getting Started

When turning on the power, the M1 start-up procedure will take place. This will take about 30sec.. Selected zones will light up green. One of the 4 line sources on ch 7-10 will light up.

You can route an Input to a specific Zone Output simply by pressing the routing button once. By pressing the button a second time, the routing will be cleared.

Balance and volume from the Input Channels can be changed on the front panel. Volume, Treble and Bass level from the Output Zones can also be changed on the front panel. When an input signal is clipping, the according clipping led on the front panel will light up red. Stereo VU-bars indicate the signal level on the Output Zones and on channel 7-10 (Pre-fader).

On the rear panel 'fixed' settings can be made. The source for the input channels can be set to either Microphone (XLR) or Line Level (Cinch). Individual phantom power switches are supplied for each input channel. Channel 1-6 has a 3 band tone control and an input gain adjustment. Channel 7-10 has a 2 band tone Control and an input gain adjustment.

The output section on the rear panel of the M1 Light has 4 balanced stereo output zones (XLR). The M1 has also two 2 stereo output amplifiers (2x 150W /4Ohms stereo) for Zone outputs 1 and 2 available through Speakon connectors.

The M1 can be controlled with Wall Mounted Control Panels (RS-485). Each Wall Mounted Control Panel has to be set to control the right room. This can be done by setting "jumpers" on the inside of the Wall Mounted Control Panel.

Input Channel 1 and 2 can have the "Priority" setting. This means, when there is a signal on Ch1 or Ch2, all other input channels of the same output zones will be muted. The priority can be switched on or off with DIP switches on the rear panel.

The amplified outputs for Zone 1 and 2 can be set in bridged mode by setting a jumper in the inside of the M1. This has to be done by qualified people. (Not available on the M1 Light)

Routing settings can be saved by pressing together the ‘ch7’ and ‘ch8’ buttons on the front panel of the M1. Hold down the 2 buttons for a few seconds.

Recalling the saved routing settings can be done by pressing together the ‘ch9’ and ‘ch10’ buttons on the M1 front panel. Hold down the 2 buttons for a few seconds.

The routing buttons (Z1 to Z4) of the input channels on the front panel of the M1 can be disabled by pressing together the ‘ch7’ and ‘ch10’ buttons. **Hold down the two buttons for at least 10 seconds !!**

To enable the routing buttons on the front panel of the M1, press down the ‘ch7’ and the ‘ch10’ buttons **simultaneously for at least 10 seconds**.

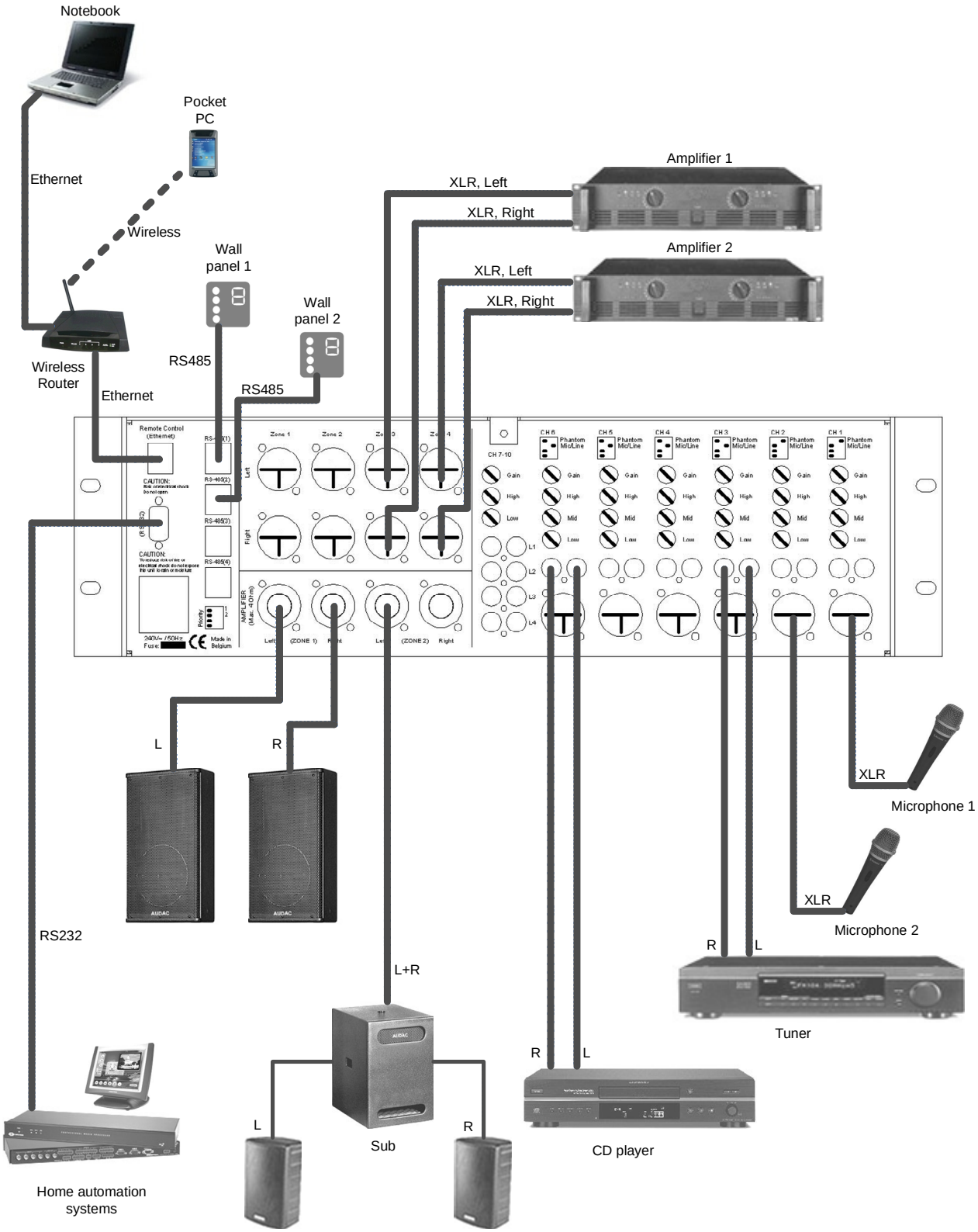
Chapter

4

Wire up the System

The AUDAC M1 amplifier is very easy in use. Following cable specs must be followed to guarantee a correct operation:

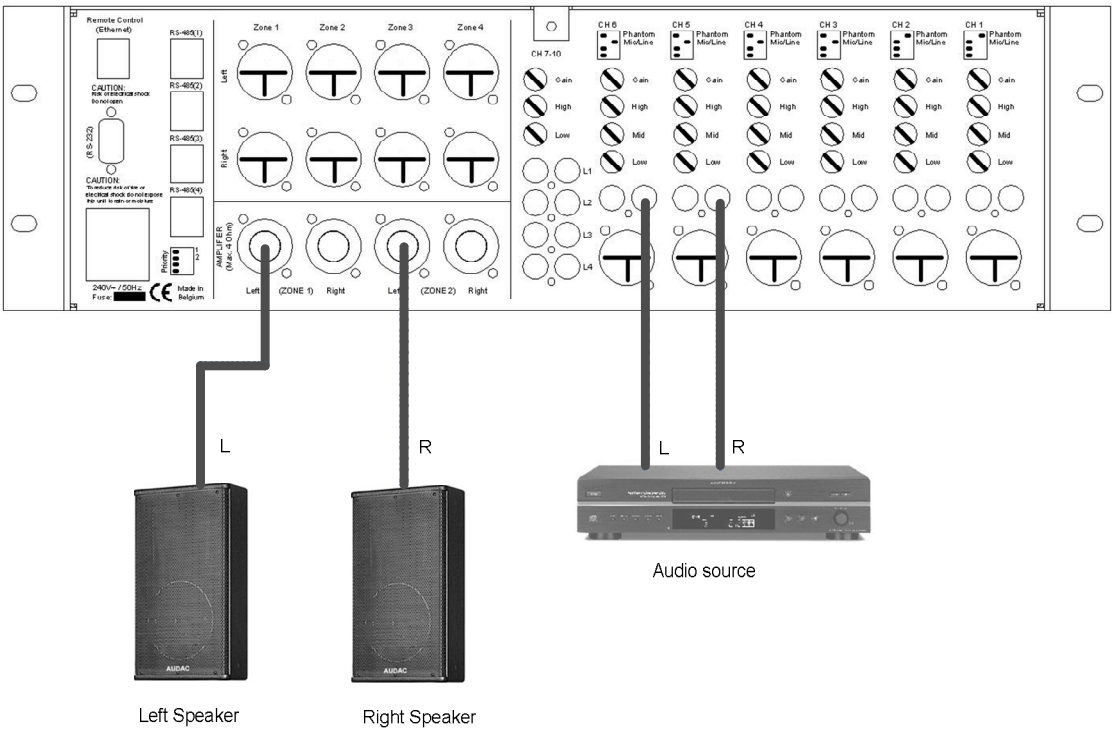
1. Speaker Cable: minimum 2x1.5 mm2 (distance >15m: 2x2.5mm2)
2. Wall Mounted Panel: UTP/FTP Cat5 cable
3. Music sources: must be connected with audio cable of good quality
4. Ethernet connection: UTP/FTP cat5 cable


Notebook
Pocket PC
Ethernet
Wireless
Wall panel 1
Wall panel 2
Wireless Router
RS485
RS485
Ethernet
Amplifier 1
XLR, Left
XLR, Right
Amplifier 2
XLR, Left
XLR, Right
L
R
XLR
Microphone 1
XLR
Microphone 2
RS232
L+R
R
L
Tuner
R
L
CD player
L
R
Sub
Home automation systems

Bridge Mode

The M1 Multimedia amplifier can also be set in bridged mode (300W / 8ohm) by setting some jumpers on the inside of the M1. This has to be done by qualified people !!

In the following paragraphs the proper wiring for a bridged M1 stereo setup is explained.



Connect the left output channel of the audio source to the left channel of an input channel of the M1. Connect the right channel of the audio source to the left channel of another input channel of the M1.

The speakers need to be connected between the " 1+ " and " 2+ " on the speakon connectors of the left channels of the amplified zone outputs. Only the left channels of the amplified zone outputs are supported in bridge mode. Do not connect anything to the right channels of the amplified zone outputs. The line levels are also available on the left channels of the XLR connectors of the zone 1 and zone 2 outputs.

Route the input channels to the desired zone outputs. In case of the example above, we have to route input channel 6 to zone output 1 and input channel 5 to zone output 2.

Chapter

5

Remote Control Interface

To use the remote control interface, the M1 has to be plugged in to an Ethernet LAN network with a standard (straight) network cable.

Make sure the M1 default network address (192.168.0.180) is within range of the connected Ethernet LAN network ! If the M1 default network address is not within range of your LAN network, contact your network specialist. The default network address can be changed with the Standard Web Based User Interface but therefore a network connection has to be made first.

A pc (or pda, pocket pc, …) with a web browser and the Macromedia Flash 6.0 plug-in (or higher) installed, is necessary to use the web based user interfaces. The pc needs to be connected within the same Ethernet LAN network.

The default URL for the Standard Web Based User Interface is: http://192.168.0.180

The default URL for the Lite Web Based User Interface is: http://192.168.0.180/small.html Be aware: the letters are case sensitive.

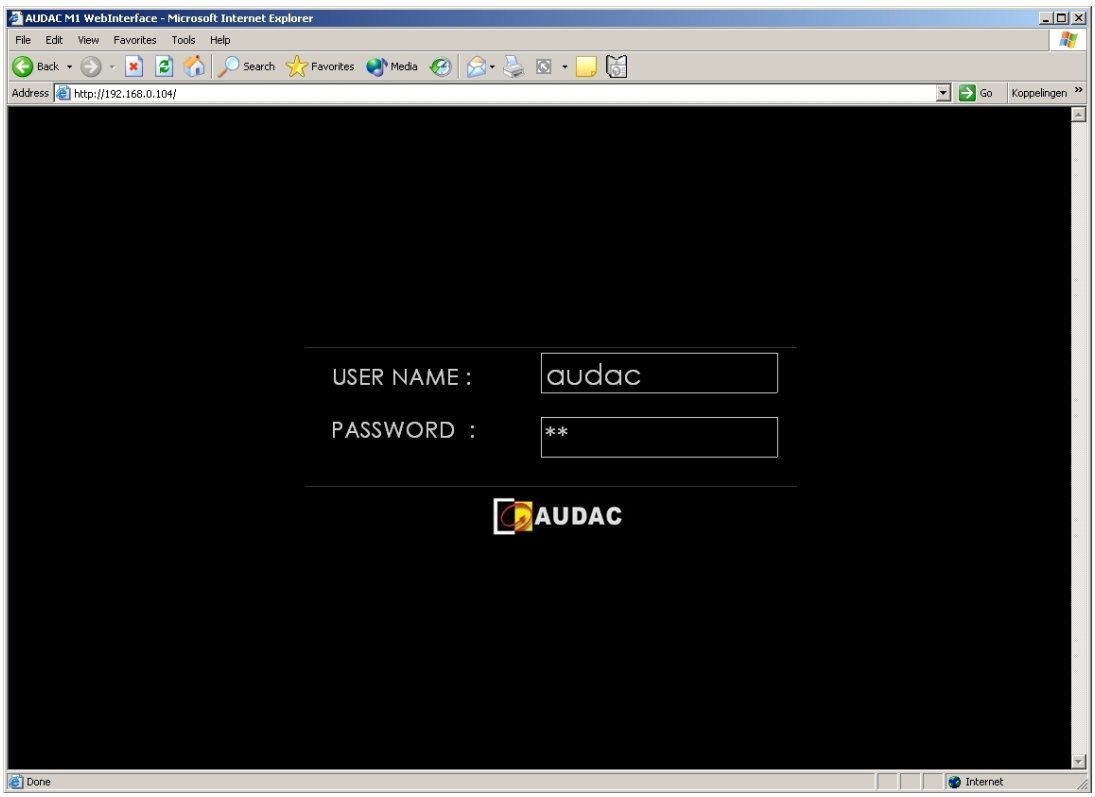
Standard Web Based User Interface

LOG-IN SCREEN:
When you surf to the webpage of the M1, you will see the logon screen of the M1. Default the IP address is http://**192.168.0.180**

You will have to enter a user name and password to get access. Default the following words are used:

User name: audac

Password: M1



CONTROL SCREEN:

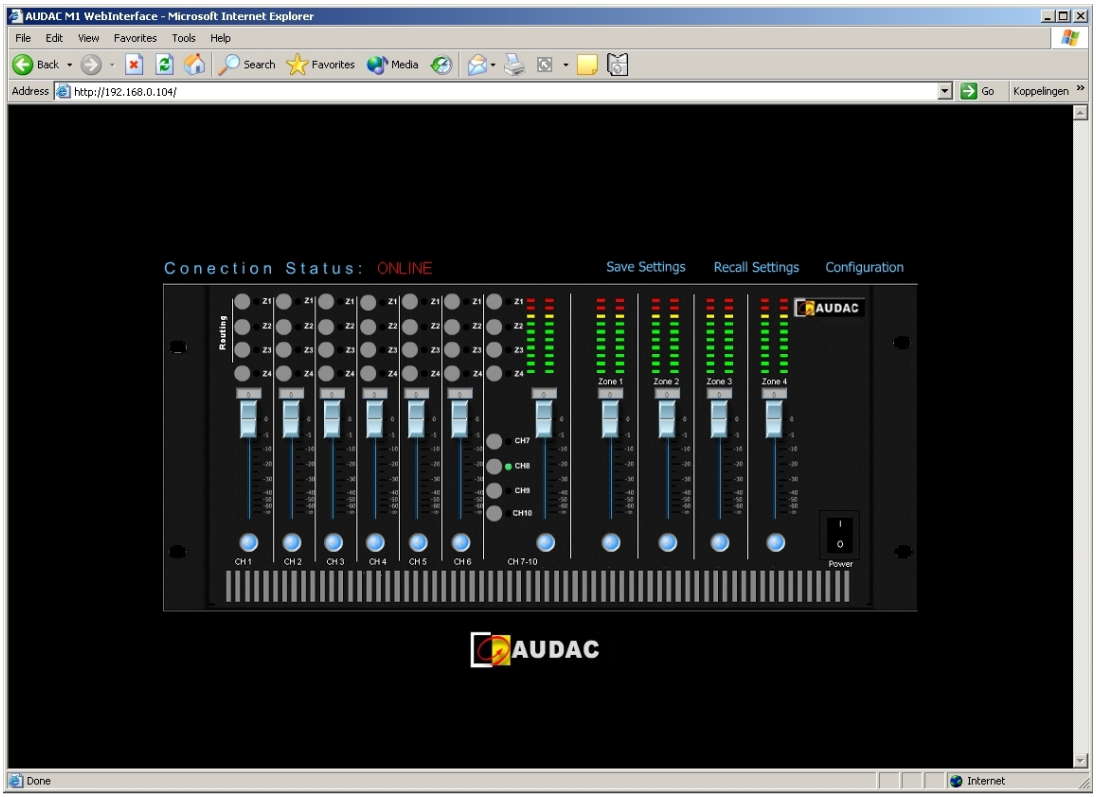
If you press “enter” after typing the correct username and password, you get access to the control screen of the M1. After logging in, the “Connection Status” will indicate “online” if a connection with the M1 has been made.

Following changes can be made: routing, volume settings of input channels and output zones, source selecting on ch 7-10, channel/zone muting.

The settings of the front panel controls can be saved by pressing the “Save” button, and the saved setting can be recalled by pressing the “Recall” button.

Saving a setting can also be done by pressing together the ‘ch7’ and ‘ch8’ button on the front panel of the M1. Hold down the 2 buttons for a few seconds.

Recalling the saved setting can also be done by pressing together the ‘ch9’ and ‘ch10’ button on the M1 front panel. Hold down the 2 buttons for a few seconds.



CONFIGURATION SCREEN:

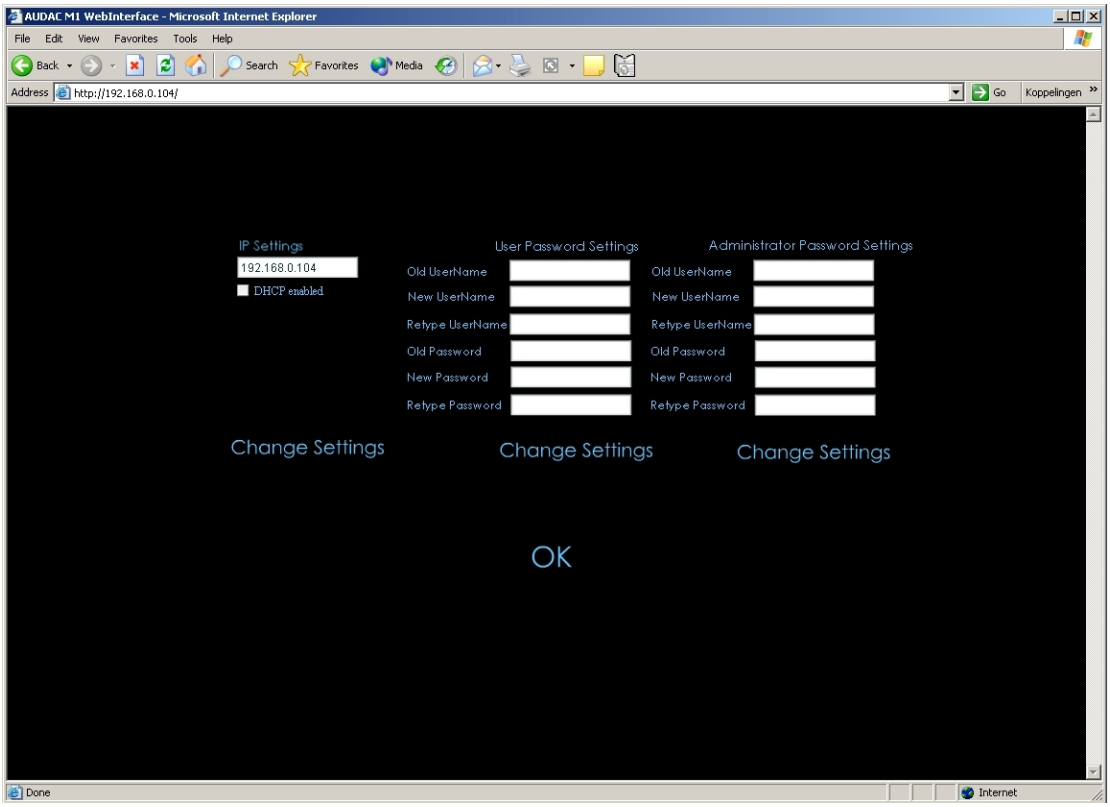
This window will be opened after pressing the "Configuration" button in the control window. (Default Username: **audac**, default password: **M1**)

In this window the IP address can be changed and DHCP can be enabled.

The user name and password and the administrator name and password can be changed.

There is a secret "rescue" password in case of emergency (passwords lost). This can be asked at info@audac.be .

After each change of settings, press the corresponding "Change Settings" button. The corresponding "Change Settings" button must be pressed to save the changed parameters. After the changes have been made, press "OK" to return to the control screen.



Chapter

6

Lite Web Based User interface

PURPOSE:

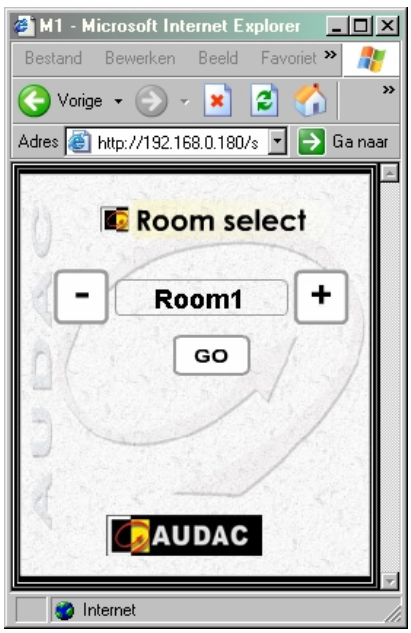
The purpose of the Lite Web Based User Interface is to offer easy access to the basic functions of the M1 and to offer access to the M1 on devices with a small screen, e.g. pocket PC's, PDA's, GSM's …

ACCESS:

To access the Lite Web Based User Interface you will need a web browser with the "Macromedia Flash Player 6 " or "Macromedia Flash Player 6 for pocket PC 2003" plug-in installed. The Lite Web Based User Interface can be accessed by typing "/small.html" after the IP-address of the M1. If the M1 has the standard IP-address, you will have to type: http://192.168.0.180/small.html (Be aware: the letters are case sensitive !!). It takes a couple of seconds to load the Flash controls in the website.

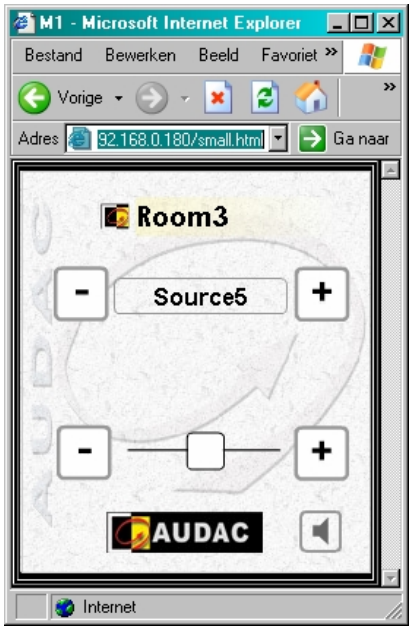
START-UP SCREEN:

The start-up screen let's you select the Room (= zone output) you wish to control. Press on the "– " or " + " button on the screen to select the wanted Room and press " GO ". After you have pressed " GO ", you will see the " Room Configuration Screen ".



ROOM CONFIGURATION SCREEN:

In this screen you can assign an input source to the selected room, change the output volume (= zone output volume) or mute the output volume.



To configure another room or to go back to the " Start-up Screen ", press on the name of the selected room.

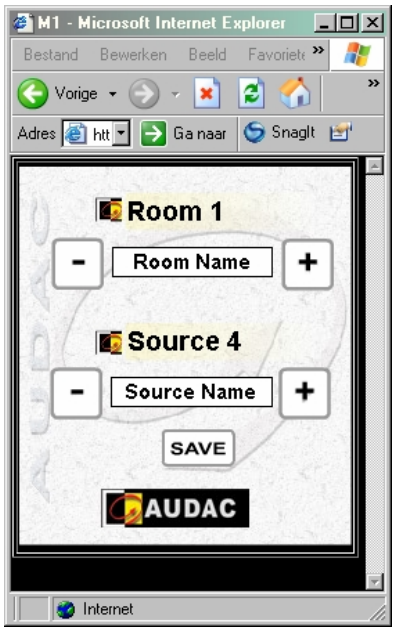
To change the names of the input sources and/or the rooms, press 3 times the " Audac " logo on the bottom of the screen.

Be aware: in the Lite Web Based User Interface it is only possible to assign 1 input source to the selected room. To select more input sources for 1 zone output, you will need to control the M1 manually or use the " Standard Web Based User Interface ".

NAME CONFIGURATION SCREEN:

This screen can be activated by pressing 3 times on the “Audac” logo in the “Room Configuration Screen”.

Here you can change the names of the “ Rooms“ and the names of the “ Input Sources“. By pressing the “ – “ and the “ + “ buttons on the screen you can navigate throughout the list of room names and input source names. By placing the cursor in the field and using the keyboard you can change the names to your flavour. When the changes are made, press the “ Save” button.



Chapter

7

Wall Mounted Control Panels (Optional)

The M1 Multimedia amplifier can be equipped with wall mounted control panels on each zone output. A zone output can be controlled by more then one wall mounted control panel. The maximum number of wall mounted control panels connected to the M1 multimedia amplifier is 4.

These wall mounted control panels are controlled by an RS485 data bus and must be connected with the M1 with “twisted pair” or “CAT5” cable.

Following settings can be changed:

- Volume of the zone output which the panel is configured for (e.g. Zone 1)

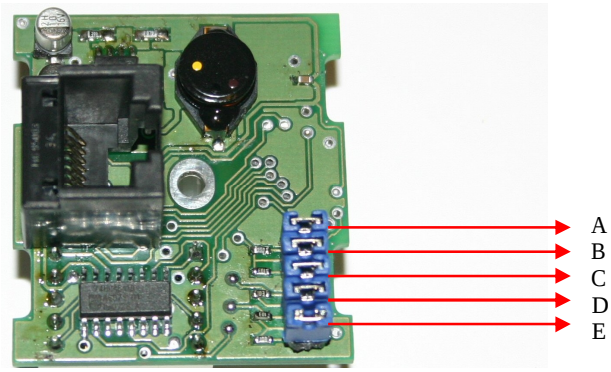
- Input source selection. (e.g. CD player, Tuner, Microphone…)

The wall mounted control panel can be configured to control the settings of a zone output (e.g. Living room, Board room …). This is done by jumper settings on the inside of the wall mounted control panel.

If the wall mounted control panel is connected to the M1, and the M1 is turned on, the digit on the wall mounted control panel will show a zero for a couple of seconds, for the next couple of seconds it will show the zone output for which the wall mounted control panel is configured and last it will keep displaying the selected input source.

When changing the volume of the zone output, the digit on the wall mounted control panel will show the zone outputs volume. The volume will be changed in smaller steps then the digit can show. If one of the volume control buttons is held down, the volume will keep increasing or decreasing. After the change has been made, the digit will show again the selected input source.

Jumper settings for zone output selection



A	B	C	D	E	Zone output
J	J	J	J	J	1
J	J	J	J		2
J	J	J		J	3
J	J	J			4

J = set jumper

Additional Information M1

Technical specifications

Sensitivity	**Microphone input**	**-60/-20 dB 600 Ohm balanced**
	Line input	**-20/+4 dB 10k Ohm**
Frequency response		**20 Hz – 20 kHz**
T.H.D. by 1 kHz		**less than 0.1%**
Signal to Noise ratio		**90 dB**
Slew rate		**+/- 30V/µsec**
Digital control		**RS-232**
Remote zone control		**RS-485**
Web based control		**Ethernet**
Zone outputs 1-4		**+6dB 100 Ohm Balanced**
Output power per channel		**100 Watt 8 Ohm**
		150 Watt 4 Ohm
Bridge mode		**300 Watt 8 Ohm**
Power Supply		**240V AC, 50-60Hz**
Max. power consumption		**600W**
Weight		**17.5 kg**
Dimensions (B x H x D)		**482 mm x 132mm x 350mm**
Unit height		**3HE**

Personal Notes